

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

1.96
R3/Sn
copy 2

FEDERAL-STATE-PRIVATE
COOPERATIVE SNOW SURVEYS



WATER SUPPLY OUTLOOK FOR ARIZONA

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY
RECEIVED

OCT 21 1971
PROCUREMENT SECTION
CURRENT SERIAL RECORDS

Prepared by
U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE
Collaborating with
SALT RIVER VALLEY WATER USERS ASSOCIATION
and
ARIZONA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with the Federal, State and private organizations listed on the last page of this report.

AS OF
APR. 1, 1971

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR ARIZONA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

|||||
Released by

MARION E. STRONG
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
PHOENIX, ARIZONA

In Cooperation with

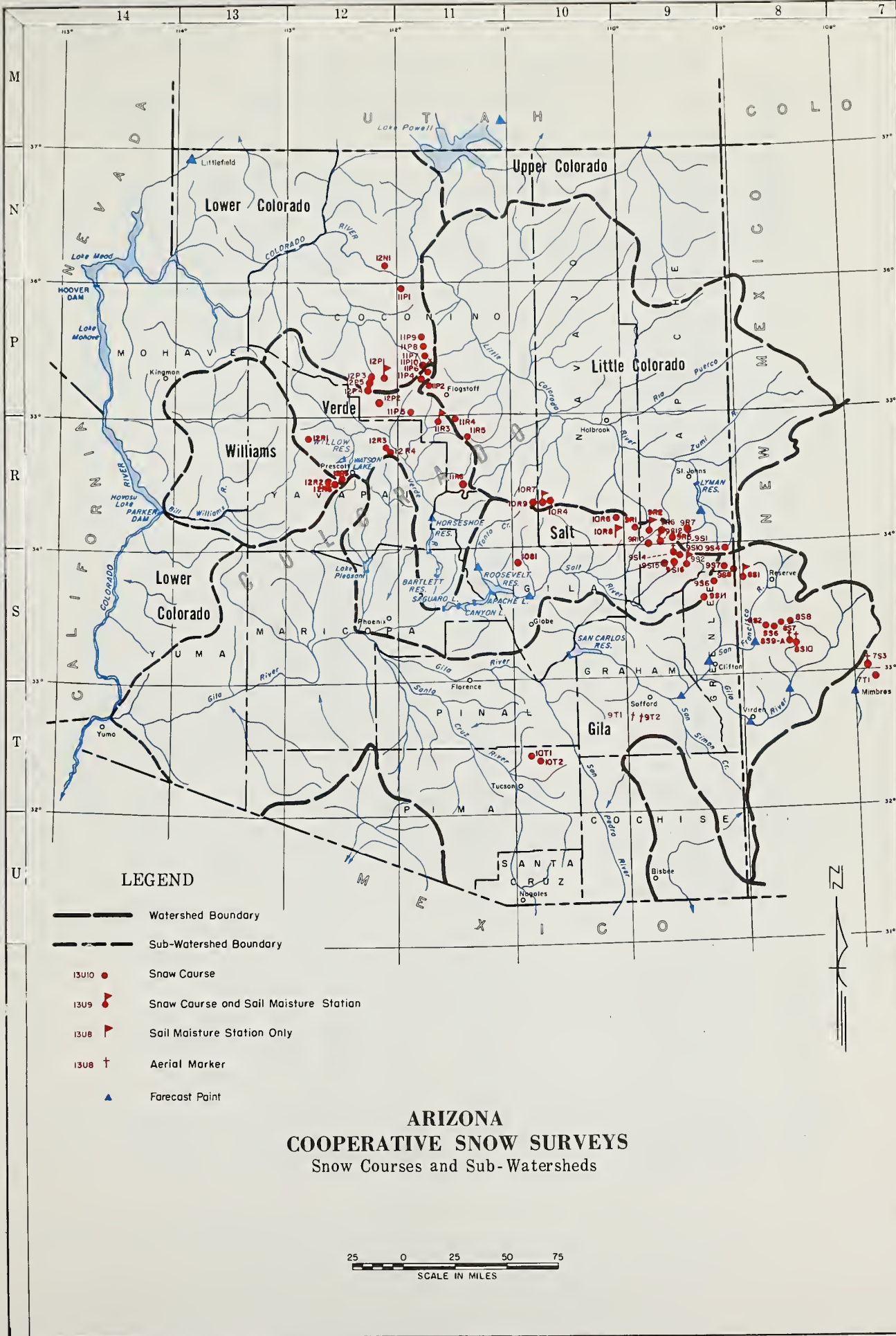
RICHARD K. FREVERT
DIRECTOR
ARIZONA AGRICULTURAL
EXPERIMENT STATION

FLOYD N. SMITH
PRESIDENT
SALT RIVER VALLEY WATER
USERS ASSOCIATION

|||||
Report prepared by

RICHARD W. ENZ, Snow Survey Supervisor

SOIL CONSERVATION SERVICE
ROOM 6029 FEDERAL BUILDING
PHOENIX, ARIZONA 85025



INDEX to SNOW COURSES and SOIL MOISTURE STATIONS

NUMBER	NAME	SEC.	TWP.	RGE.	ELEV.	DRAINAGE	OBSERVER
11P10-A	Agassiz	32	23N	7E	11200	Little Colorado	SCS-USBR
11R6	Baker Butte (p)	4	12N	9E	7300	Verde	SCS
9S1-A	Baldy (p)	28	7N	27E	9125	Little Colorado	SCS
9S15	Baldy #2	12	6N	26E	9750	Little Colorado	SCS-FS
9S16	Baldy #3	13	6N	26E	10950	Little Colorado	SCS-FS
10T1	Bear Wallow	6	12S	16E	8100	Gila	FS
9S6	Beaver Head	13	4N	30E	8000	San Francisco	Pvt-SRP
12P5	Bill Williams Intermediate	17	21N	2E	8550	Cataract	FS
12P4	Bill Williams Summit	17	21N	2E	8950	Verde	FS
9S10-A	Black River Ovide	10	6N	27E	9400	Salt	SCS
12N1	Bright Angel	34	33N	3E	8400	Bright Angel Creek	NPS
12R1	Camp Wood	3	16N	6W	5700	Verde	FS
10R7-M	Canyon Creek #2	18	11N	15E	7500	Little Colorado	SCS
10R9	Canyon Point (p)	28	11N	14E	7600	Salt	SCS
12P1-M	Chalender	27	22N	3E	7100	Verde	FS
9R7	Cheese Springs	28	8N	27E	8600	Little Colorado	SCS
12R6	Copper Basin Ovide (p)	23	13N	3W	6720	Verde	SCS
10R8-A	Corduroy Creek	4	8N	21E	6000	Salt	SCS
9S7	Coronado Trail	26	5N	30E	8000	San Francisco	FS
9T2-A	Crazy Horse	34	8S	24E	10200	Gila	FS
7T1	Emory Pass #1	16	16S	9W**	7800	Mimbres	SCS
7T2	Emory Pass #2	16	16S	9W**	7800	Mimbres	SCS
10R6	Forest Oale	2	9N	21E	6430	Salt	BIA
9R5	Ft. Apache	18	7N	27E	9160	Little Colorado	SCS
11P2	Ft. Valley (p)	22	22N	6E	7350	Little Colorado	FS
8S1-M	Frisco Ovide	31	6S	20W**	8000	San Francisco	FS
12R4	Gaddes Canyon	11	15N	2E	7600	Verde	Pvt
11P1	Grand Canyon	21	30N	4E	7500	Hance Creek	NPS
9S11	Hannagan Meadows (p)	19	3N	29E	9090	San Francisco	Pvt
11R5	Happy Jack	30	17N	9E	7630	Verde	FS
9R10	Hawley Lake	13	7N	24E	8300	Salt	BIA
10R4	Heber (p)	28	11N	15E	7600	Little Colorado	SCS
9T1-A	High Peak	34	8S	24E	10500	Gila	FS
8S9-A	Hummingbird	19	11S	17W**	10550	Gila	Pvt-SCS
8S6	Ice King	6	11S	18W**	8020	San Francisco	Pvt-SCS
11P9	Inner Basin #1 (p)	28	23N	7E	10000	Little Colorado	SCS-USBR
11P8	Inner Basin #2 (p)	28	23N	7E	9750	Little Colorado	SCS-USBR
11P7	Inner Basin #3	3	23N	7E	10250	Little Colorado	SCS-USBR
12R2	Iron Springs	22	14N	3W	6200	Bill Williams	SCS
9S2-A	Maverick Fork (p)	13	6N	27E	9150	Salt	SCS
7S3-A	McKnight Cabin	10	15S	10W**	9300	Mimbres	Pvt-SCS
9R2-M	McNary	23	8N	23E	7200	Salt	BIA
9R1	Milk Ranch	33	8N	23E	7000	Salt	BIA
12R3	Mingus Mountain	3	15N	2E	7100	Verde	Pvt
8S2	Mogollon	2	11S	19W**	7000	San Francisco	Pvt
11R4	Mormon Lake	13	18N	8E	7350	Little Colorado	SCS
11R3-M-A	Mormon Mountain (p)	14	18N	8E	7500	Verde	SCS
9S12-A	Mt. Ord	4	6N	26E	11200	Salt	SRP-SCS
11P5-M	Newman Park	25	19N	6E	6750	Verde	SCS
9S4	Nutriso	23	6N	30E	8500	San Francisco	FS
8S7	Redstone Trail	5	11S	18W**	8600	San Francisco	Pvt
10T2	Rose Canyon	15	12S	16E	7300	Gila	FS
8S8	Silver Creek Ovide	4	11S	18W**	9000	San Francisco	Pvt
9S14-A	Smith Cienega	10	6N	26E	10050	Salt	SRP-SCS
11P4	Snow Bowl #1 (p)	36	23N	6E	10260	Verde	FS
11P6	Snow Bowl #2	31	23N	7E	11000	Verde	FS
9S8	State Line	6	6S	21W**	8000	San Francisco	FS
12P2	White Horse Lake Jct.	2	20N	2E	7180	Verde	FS
12R5	White Spar	19	13N	2W	6000	Verde	SCS
8S10-A	Whitewater	19	11S	17W**	10750	Gila	Pvt-SCS
12P3	Williams Ski Run	9	21N	2E	7720	Cataract	FS
9R6	Wilson Lake (p)	4	7N	26E	9000	Salt	SCS
10S1	Workman Creek	33	6N	14E	6900	Salt	FS

M SOIL MOISTURE STA.

(p) STORAGE GAGE

A AERIAL SNOW DEPTH MARKER

* SOIL MOISTURE STA. ONLY

** NM PRINCIPAL MERIDIAN

ARIZONA WATER SUPPLY OUTLOOK
APRIL 1, 1971

* * * * *
* Seasonal runoff is expected to be 1/4 of average this year. *
* Stored water is close to average in all reservoirs except San *
* Carlos. Water supplies will be very short on the San Carlos Pro- *
* ject and along the Upper Gila, but adequate elsewhere. *
* * * * *

SNOW COVER

Warm temperatures in March melted most of what little snow cover there was earlier in the month. The snow line is now at about 9500'. On the San Francisco Peaks and in the White Mountains at 11,000' there is three to four feet of snow containing 12 to 15" of water, but this is the lowest in the ten years of record at these sites.

PRECIPITATION

March precipitation was again deficient with nothing occurring in the last three weeks. Since November 1 precipitation has been 35% of average on the Gila Watershed, 50% on the Salt and 60% on the Verde.

SOIL MOISTURE

Warm, dry air is drying surface soils and significant runoff is not likely from even a heavy storm.

RESERVOIR STORAGE

Combined storage in Salt River Project Reservoirs is now just half of capacity and 9% below average. Most other reservoirs contain above average amounts except San Carlos, which is at its lowest level for this date since 1957.

STREAMFLOW AND WATER SUPPLY

Streamflow forecast for Arizona streams range from 20% of average on the Gila River to 40% on the Verde. Seasonal runoff (January-May) will be the lowest in 15 years on the Gila, 12 years on the Salt, and 8 years on the Verde. If the present precipitation pattern continues, some all-time record low flows may result.

Water supplies will be very short along the Upper Gila River and on the San Carlos Project this year. Heavy pumping and reduced planted acreage will be required. On the Salt River Project, water supplies will be adequate, but carry-over storage will be low.

THIS IS THE FINAL REPORT OF THE SEASON.

ABOUT
STREAMFLOW FORECASTS APRIL 1, 1971

12001

STREAMFLOW FORECASTS APRIL 1, 1971		THIS YEAR		PAST RECORD	
BASIN STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average †
<u>SALT RIVER DRAINAGE</u>					
Salt near Roosevelt	26.0	21	Apr-May	97.9	121.7
Tonto Creek near Roosevelt	1.5	20	Apr-May	3.1	7.7
Verde River above Horseshoe	20.0	40	Apr-May	28.2	50.1
<u>GILA RIVER DRAINAGE</u>					
Gila River near Gila	6.0	35	Apr-May	11.4	16.8
Gila River near Solomon	7.0	20	Apr-May	18.7	34.6
Gila River near Virden	3.5	20	Apr-May	10.0	17.4
Frisco River at Clifton	4.5	24	Apr-May	10.6	18.9
Frisco River at Glenwood	1.8	22	Apr-May	4.4	8.1
<u>MIMBRES RIVER DRAINAGE</u>					
Mimbres River near Mimbres	0.2	15	Apr-May	.3	1.3
<u>COLORADO RIVER DRAINAGE</u>					
Little Colo. River above Lyman Dam	0.2	3	Apr-June	3.5	6.1
Colorado River -- Lake Powell Inflow *	7275.0	111	Apr-July	8220.0	6527.0
<u>VIRGIN RIVER DRAINAGE</u>					
Virgin River nr. Littlefield	28.0	84	Apr-June	12.7	33.4
<u>GRANITE CREEK DRAINAGE</u>					
Granite Creek	0.2	---	Apr-May	---	---
Willow Creek	0.1	---	Apr-May	---	---
† Based on the 15-year period, 1953-67					
* Forecast issued by Soil Conservation Service, Salt Lake City, Utah					

- 2 -

1971

SPRING RUNOFF

STREAM & STATION	Measured Runoff Jan.-Mar.	Forecast Runoff April-May	Total - January thru May		
			1971	15-Year Average	% of Average
Salt River at Intake	41.8	26.0	67.8	280.9	24
Verde River above Horseshoe	47.3	20.0	67.3	171.9	39
Tonto Creek above Roosevelt	4.8	1.5	6.3	42.6	15
Gila River nr. Virden	10.8	3.5	14.3	59.3	24
Gila River nr. Solomon	19.2	7.0	26.2	119.6	22
Frisco River at Clifton	8.9	4.5	13.4	59.8	22
Little Colorado	1.0 <u>1/</u>	0.2 <u>2/</u>	1.2 <u>3/</u>	9.3	13

Provisional streamflow data supplied by Salt River Project and U.S. Geological Survey.

1/ January-March runoff based on change in storage of Lyman Reservoir.
(Supplied by Arizona State Parks Board).

2/ April-June period.

3/ January-June period.

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

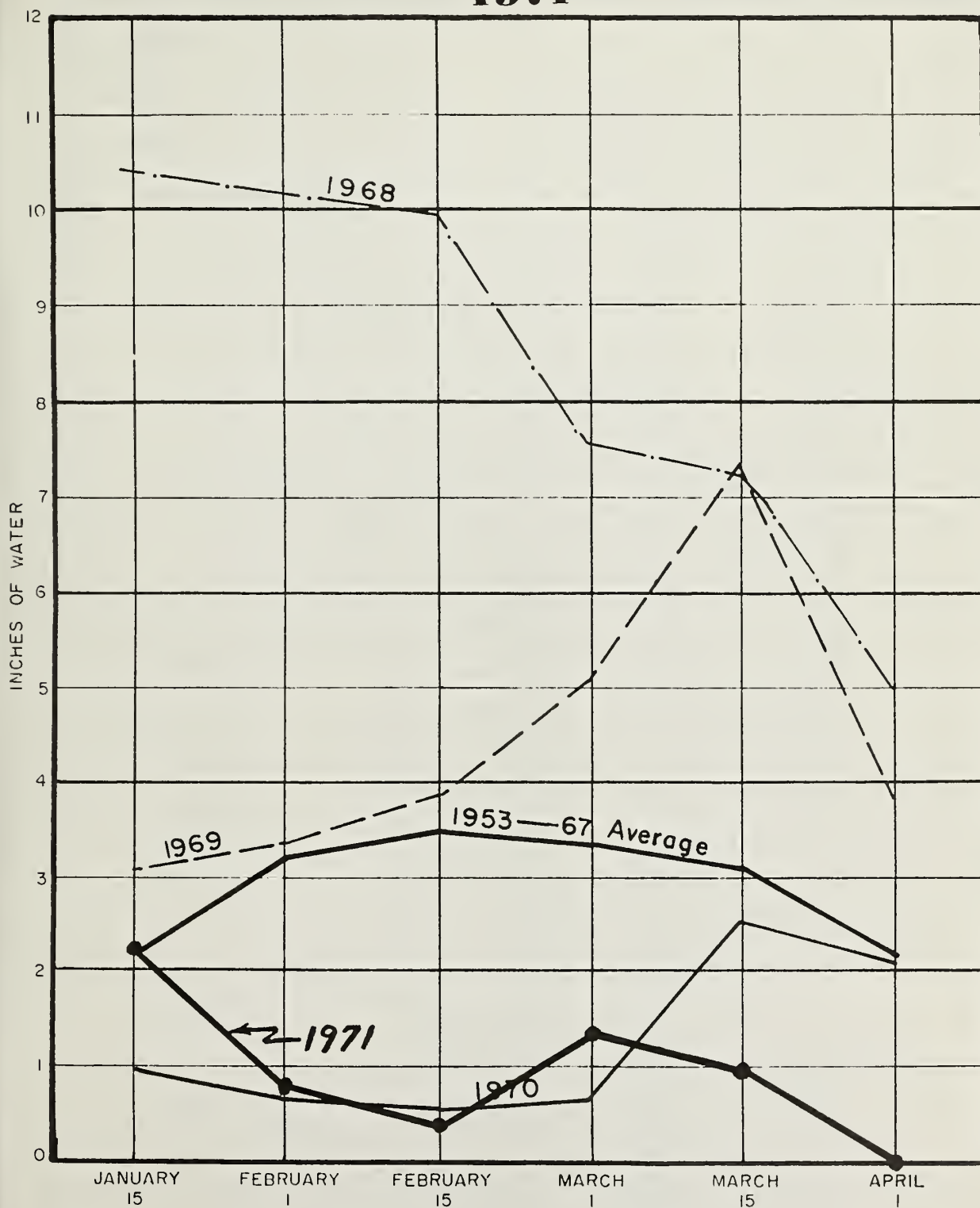
ABOUT APRIL 1, 1971

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average†
<u>GILA RIVER DRAINAGE</u>					
Agua Fria	Lake Pleasant	157.6	71.9	76.5	44.1
Granite	Watson Lake	4.7	1.9	3.5	---
Granite	Willow Creek	6.1	1.1	2.3	---
Gila	San Carlos	984.6	0.2	167.5	118.2
Verde (2)	Bartlett & Horseshoe	317.7	172.8	140.4	131.0
Salt (4)	Roosevelt, Apache, Canyon & Saguaro	1755.0	863.0	1266.2	1002.5
<u>COLORADO RIVER DRAINAGE</u>					
Colorado	Lake Havasu	619.4	560.5	546.3	554.5
Colorado	Lake Mohave	1810.0	1,666.0	1610.0	1695.9
Colorado	Lake Mead	26159.0	16,289.0	16597.0	16072.4
Colorado	Lake Powell	25002.0	12,434.0	9535.0	---
Little Colorado	Lyman	30.6	11.5	21.0	10.8
Little Colorado	Show Low Lake	5.1	0.3	0.4	2.3*
† Based on 15-year period, 1953-67					
* Average is for less than 15 years of record.					
- 4 -					

† Based on 15-year period, 1953-67

* Average is for less than 15 years of record.

RELATIVE SNOW WATER ACCUMULATION ARIZONA 1971



This graph represents the average snow water content on eleven selected snow courses on Arizona Sub-Watersheds.

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

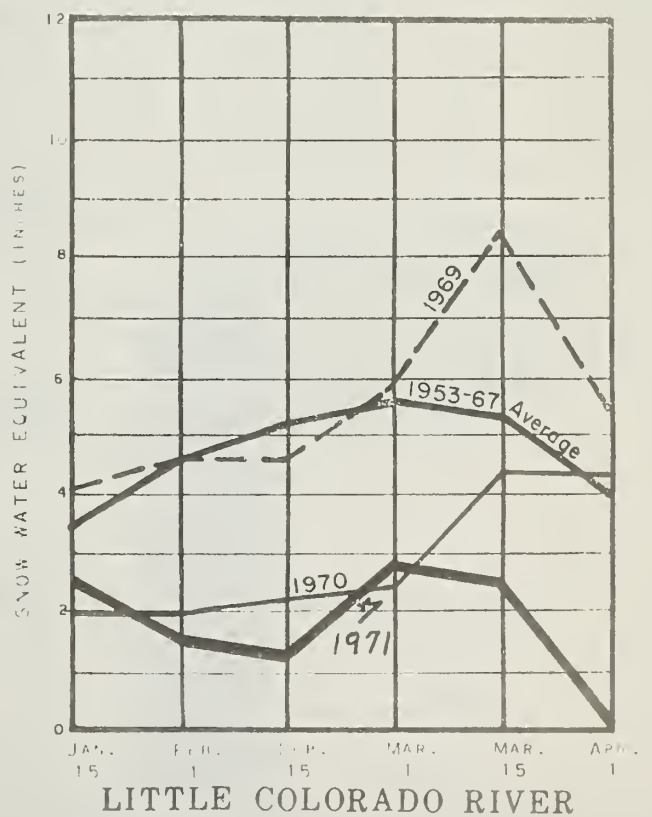
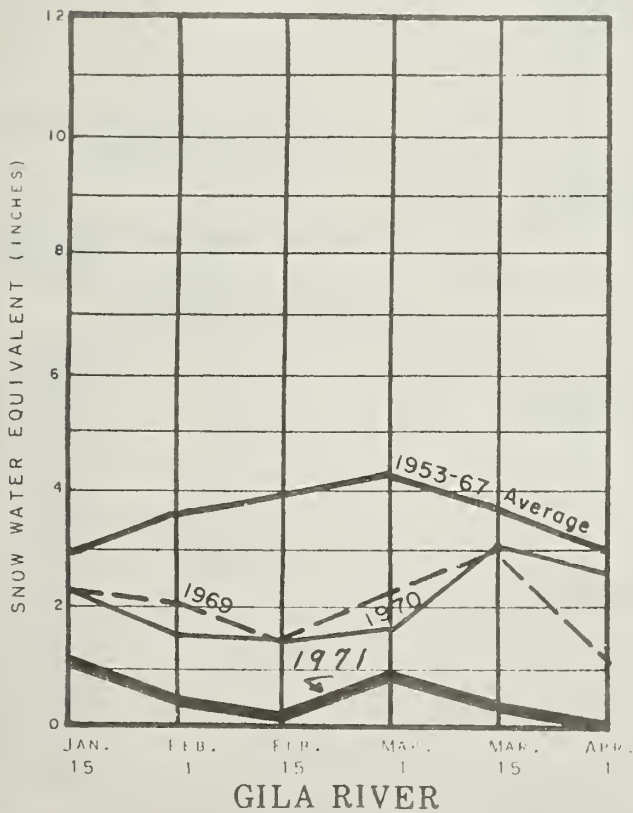
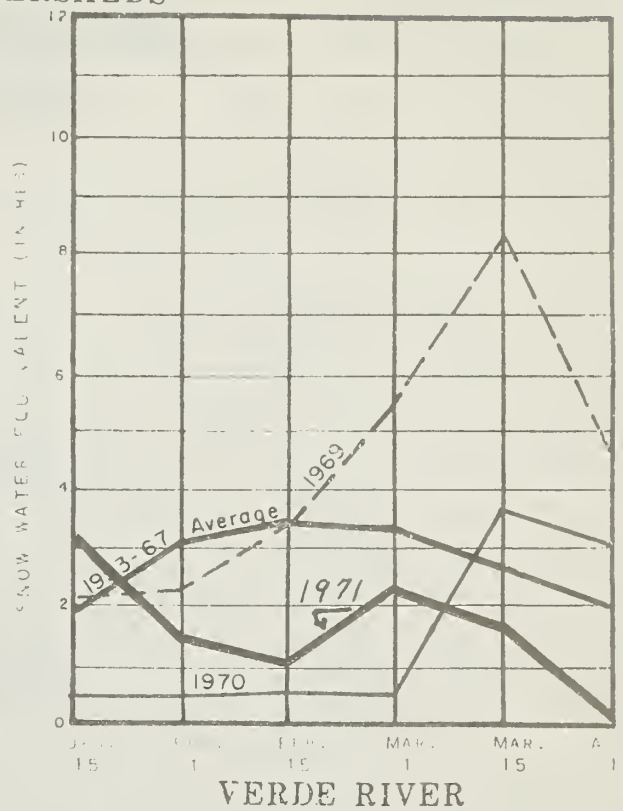
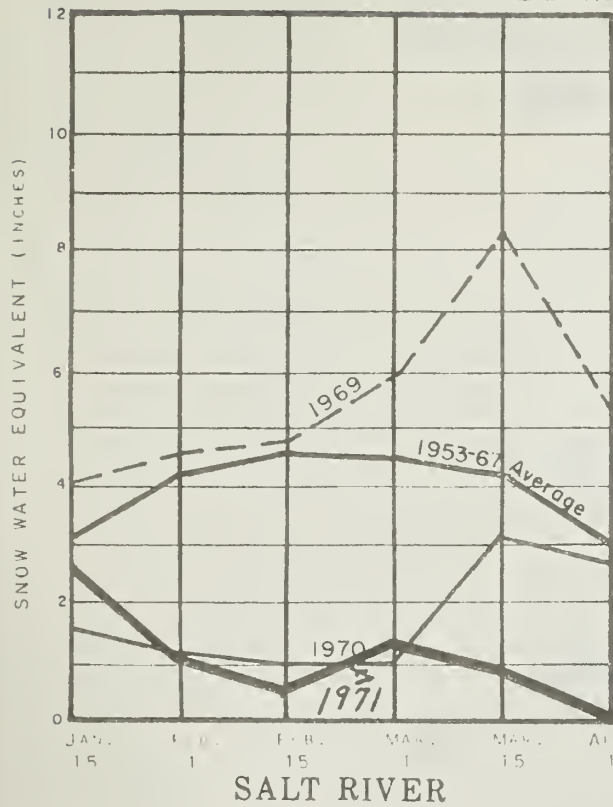
APRIL 1, 1971

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
Gila	10	4	3
Salt	10	0	0
Verde	10	19	28
Little Colorado	5	3	4
- 6 -			

1971

ARIZONA SNOW COVER

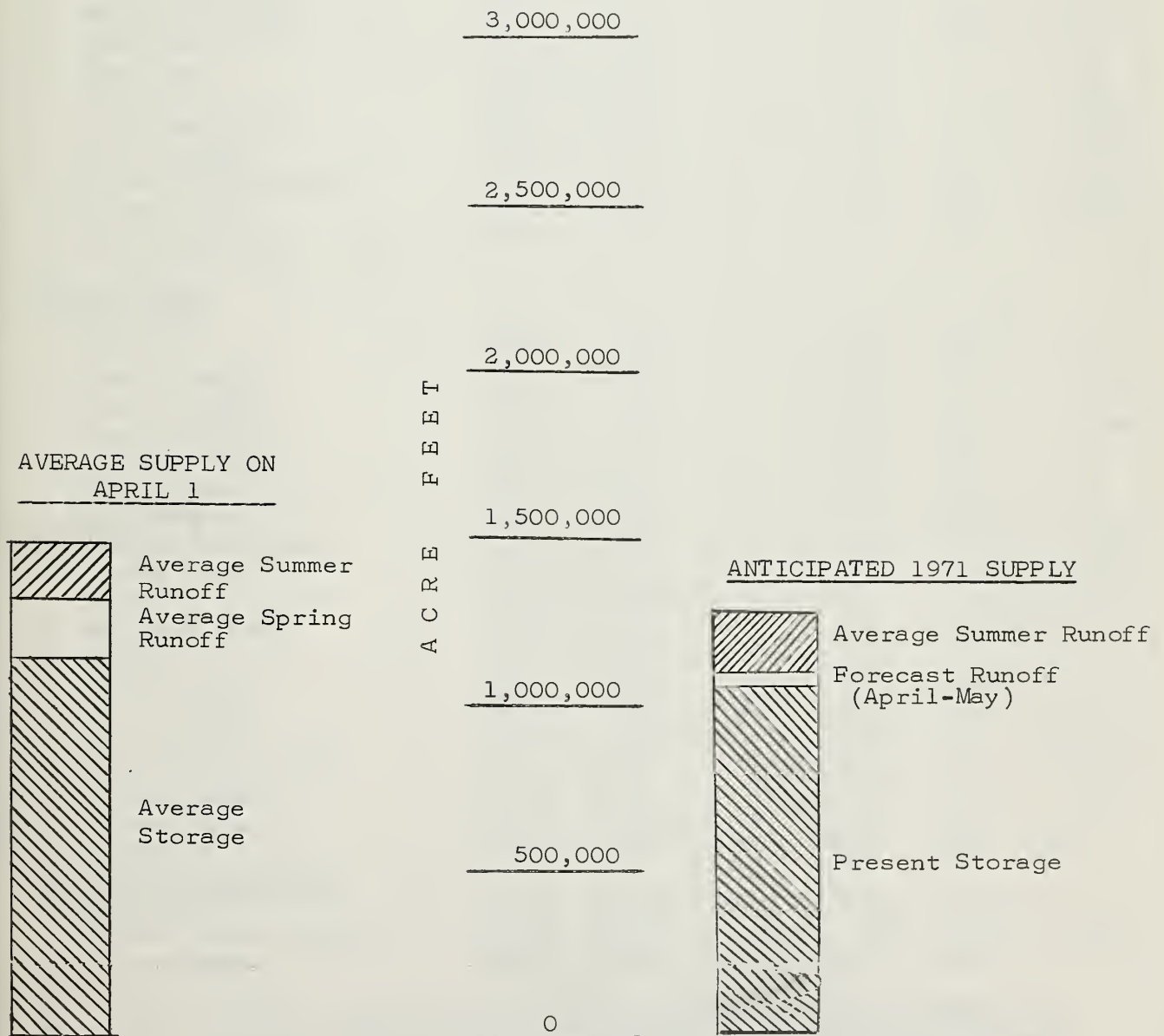
BY WATERSHEDS





WATER SUPPLY INVENTORY
SALT RIVER VALLEY SYSTEM

APRIL 1, 1971



* Based on Present Storage + Forecast Spring Runoff + Average Summer Runoff

SNOW ABOUT APRIL 1, 1971

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average †
<u>GILA RIVER</u>						
Bear Wallow	8100	3/31	0	0.0	2.5	2.0
Beaver Head	8000	3/30	0	0.0	T	1.0
Coronado Trail	8000	3/31	0	0.0	0.0	0.2
Crazy Horse (A)	10200	---	---	---	---	---
Emory Pass #1 *	7800	3/31	0	0.0	0.0	---
Emory Pass #2 *	7800	3/31	0	0.0	0.0	---
Frisco Divide	8000	3/31	0	0.0	0.0	0.4
Hannagan Meadows *	9090	3/30	0	0.0	7.8	7.8**
High Peak (A)	10500	---	---	---	---	---
Hummingbird (A)	10550	3/31	0	0.0	15.9	18.5**
McKnight Cabin * (A)	9300	3/31	0	0.0	0.0	---
Mogollon	7000	3/31	0	0.0	T	0.0
Nutrioso	8500	3/31	0	0.0	0.0	0.2
Redstone Trail	8600	3/31	0	0.0	7.7	6.8**
Rose Canyon	7300	3/31	0	0.0	0.0	0.4
Silver Creek Divide	9000	3/31	2	1.2	11.6	12.2**
State Line	8000	3/31	0	0.0	0.0	0.2
Whitewater (A)	10750	3/31	31	8.2	21.3	22.2**
<u>SALT RIVER</u>						
Baldy #2	9750	3/26	20	7.4	19.5#	15.5**
Baldy *	9125	3/31	0	0.0	4.0	5.3
Beaver Head	8000	3/30	0	0.0	T	1.0
Canyon Creek	7500	3/30	0	0.0	0.5	1.0**
Canyon Point	7600	3/30	0	0.0	0.6	0.9**
Coronado Trail	8000	3/31	0	0.0	0.0	0.2
Forest Dale	6430	3/31	0	0.0	0.0	0.0
Ft. Apache	9160	3/31	0	0.0	6.9	6.1
Hannagan Meadows	9090	3/30	0	0.0	7.8	7.8**
Hawley Lake	8300	3/31	0	0.0	1.3	3.1**
Heber	7600	3/30	0	0.0	0.5	1.1
Maverick Fork	9050	3/31	0	0.0	4.7	6.8
McNary	7200	3/31	0	0.0	0.2	0.3
Milk Ranch	7000	3/31	0	0.0	0.3	0.1
Mt. Ord (A)	11000	3/25	39	12.9	19.2	22.5**
Nutrioso *	8500	3/31	0	0.0	0.0	0.2
Smith Cienega (A)	9850	3/25	31	9.6	18.2	16.8**
Wilson Lake	9000	3/31	2	0.7	9.3	7.3**
Workman Creek	6900	3/31	0	0.0	0.0	1.5
Baldy #3	10950	3/26	33	12.2	20.2	22.7
<u>BILL WILLIAMS RIVER</u>						
Camp Wood *	5700	3/31	0	0.0	0.3	0.1
Copper Basin Divide	6720	3/31	0	0.0	0.2	0.0**
Iron Springs	6200	3/31	0	0.0	0.3	0.0

† 1953-67 15-year period. (*) Adjacent drainage. (**) 1953-67 Adjusted average. (A) Aerial observation: Water content estimated.
Estimate

ABOUT APRIL 1, 1971

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
					Last Year	Average †
NAME	Elevation					
<u>VERDE RIVER</u>						
Baker Butte	7300	3/30	0	0.0	1.0	1.6**
Camp Wood	5700	3/31	0	0.0	0.3	0.1
Chalender	7100	3/31	0	0.0	2.4	0.7
Copper Basin Divide	6720	3/31	0	0.0	0.2	0.0**
Fort Valley	7350	3/31	0	0.0	4.0	0.7
Gaddes Canyon	7600	3/31	0	0.0	3.6	2.6**
Happy Jack	7630	3/31	0	0.0	1.8	1.2
Iron Springs *	6200	3/31	0	0.0	0.3	0.0
Mingus Mountain	7100	3/31	0	0.0	1.0	0.1
Mormon Lake *	7350	3/31	0	0.0	1.8	1.6
Mormon Mountain	7500	3/31	0	0.0	3.6	2.5
Newman Park	6750	3/31	0	0.0	1.2	0.5**
Snow Bowl #1	10260	3/31	15	5.7	11.3	9.0**
Snow Bowl #2	11000	3/31	24	8.6	19.9	14.8**
White Horse Lake Jct.	7150	3/31	0	0.0	2.1	---
White Spar	6000	3/31	0	0.0	0.0	0.0**
<u>LOWER COLORADO RIVER</u>						
Bill Wms. Intermediate	8550	3/31	0	0.0	9.0	---
Bill Williams Summit	8950	3/31	13	4.0	12.3	---
Bright Angel	8400	---	---	---	---	---
Chalender *	7100	3/31	0	0.0	2.4	0.7
Fort Valley	7350	3/31	0	0.0	4.0	0.7
Grand Canyon	7500	3/31	0	0.0	1.3	0.4
Williams Ski Run	7720	3/31	0	0.0	7.9	---
<u>LITTLE COLORADO RIVER</u>						
Agassiz	11200	3/31	33	12.0	24.9	---
Baldy	9125	3/31	0	0.0	4.0	5.3
Baldy #2	9750	3/26	20	7.4	19.5	15.5**
Baldy #3	10 950	3/26	33	12.2	20.2	22.7**
Canyon Creek	7500	3/30	0	0.0	0.5	1.0**
Canyon Point	7600	3/30	0	0.0	0.6	0.9**
Cheese Springs	8600	3/31	0	0.0	6.0	---
Forest Dale	6430	3/31	0	0.0	0.0	0.0
Ft. Apache	9160	3/31	0	0.0	6.9	6.1
Fort Valley	7350	3/31	0	0.0	4.0	0.7
Happy Jack *	7630	3/31	0	0.0	1.8	1.2
Heber	7600	3/30	0	0.0	0.5	1.1
Inner Basin #1	10100	3/31	14	5.6	21.7	---
Inner Basin #2	9750	3/31	1	0.5	15.3	---
Inner Basin #3	10250	3/31	2	0.6	17.3	---
McNary	7200	3/31	0	0.0	0.2	0.3
Mormon Lake	7350	3/31	0	0.0	1.8	1.6
Mormon Mountain	7500	3/31	0	0.0	3.6	2.5
Nutriosio	8500	3/31	0	0.0	0.0	0.2
Snow Bowl #1	10260	3/31	15	5.7	11.3	9.0**
Snow Bowl #2	11000	3/31	24	8.6	19.9	14.8**
Wilson Lake *	9000	3/31	2	0.7	9.3	7.3**
† 1953-67 15-year period. (*) Adjacent drainage. (**) 1953-67 Adjust-						
ed average. (A) Aerial observation; Water content estimated.						

1971

SNOW ADDITIONS AND CORRECTIONS

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average †
Agassiz	11200	3/3	48	11.0	---	---
Baker Butte #2	7700	1/31	19	6.0	---	---
		2/15	16	5.9	---	---
		2/28	26	8.2	---	---
		3/15	26	9.1	---	---
		3/30	8	3.1	---	---
Doyle Saddle	10900	1/11	36	8.6	---	---
		2/2	39	11.0	---	---
		3/3	69	15.2	---	---
		3/31	51	15.8	---	---
Fort Apache	9160	1/29	10	2.6	---	---
Hummingbird	10550	2/15	19	4.1	---	---
Snow Bowl #1	10260	1/28	16	4.8	---	---
Snow Bowl #2	11000	1/13	27	6.9	---	---
		2/12	17	6.0	---	---
		2/27	40	8.6	---	---
Whitewater	10750	2/15	15	5.0	---	---
		3/3	40	8.8	---	---
		-11 -				

S N O W P I L L O W D A T A

BAKER BUTTE

Elevation: 7300

WATER CONTENT IN INCHES

WATER CONTENT IN INCHES

ACCUMULATED PRECIPITATION: 1971

10

8

6

4

2

0

10

8

6

4

2

0

1969

1971

1970

APRIL

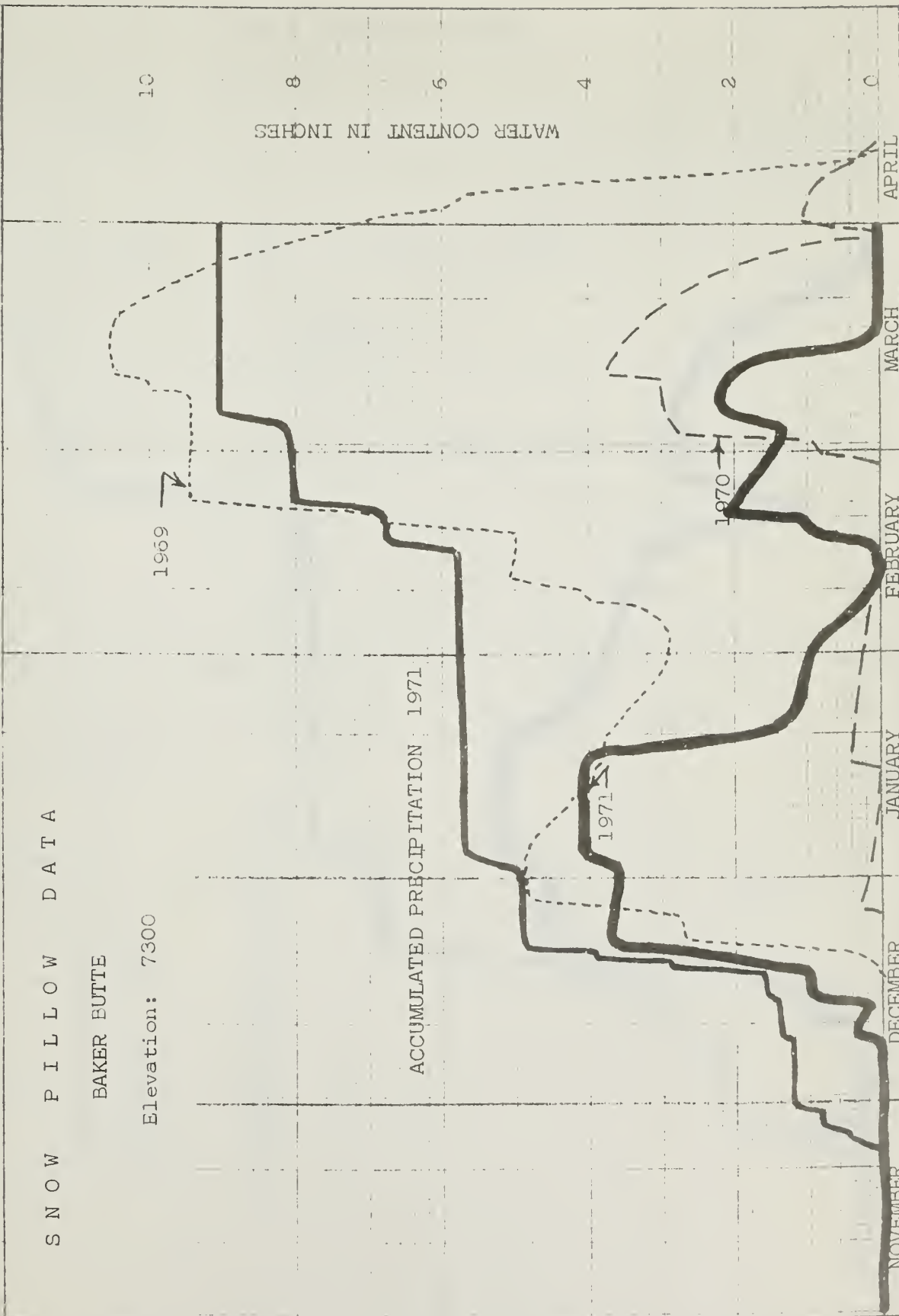
MARCH

FEBRUARY

JANUARY

DECEMBER

NOVEMBER



S N O W P I L L O W D A T A

MORMON MOUNTAIN

Elevation: 7500

ACCUMULATED PRECIPITATION 1971

WATER CONTENT IN INCHES

10

8

6

4

2

APRIL

MARCH

FEBRUARY

JANUARY

DECEMBER

NOVEMBER

1970

1971

1959

10

8

6

4

2

0

WATER CONTENT IN INCHES

PRECIPITATION (Inches)

ABOUT APRIL 1, 1971

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION			FROM APPROX. NOV. 1 TO DATE		
		Date of Reading	Month's Precipitation	Average †	This Year	Average †	Percent of Average
<u>GILA RIVER</u>							
Silver Creek Divide	9000	3/31	.25	---	5.15	---	-
Hannagan Meadows	9030	3/30	.62	3.14*	4.96	13.24*	37
<u>SALT RIVER</u>							
Canyon Point	7600	3/30	.90	---	10.26	---	-
Hannagan Meadows	9030	3/30	.62	3.14*	4.96	13.24*	37
Little Wildcat (Heber Snow Course)	7600	3/30	1.22	3.15*	8.12	14.52*	56
Maverick Fork	9050	3/31	.90	2.59*	6.55	12.52*	52
Workman Creek **	6970	3/30	.66	3.38	7.94	17.26	46
Wilson Lake	9100	3/31	1.00	---	7.15	---	-
<u>VERDE RIVER</u>							
Baker Butte	7300	3/30	1.06	---	9.13	---	-
Copper Basin Divide	6720	3/31	.90	---	6.51	---	-
Fort Valley **	7350	3/31	.32	1.84	5.22	9.10	57
Happy Jack **	7480	3/31	.58	2.42*	6.79	11.29*	60
Mingus Mountain	7660	3/31	.36	2.04	6.23	9.79	64
Mormon Mountain	7500	3/31	.65	---	11.54	---	-
<u>LITTLE COLORADO</u>							
Inner Basin #1	9830	3/31	.70	---	10.95	---	-
Inner Basin #2	10050	3/31	.80	---	13.60	---	-
Sheep Crossing (Baldy Snow Course)	9125	3/31	.90	2.34*	6.20	11.76*	53
Little Wildcat (Heber Snow Course)	7600	3/30	1.22	3.15*	8.12	14.52*	56
† 1953-67 Average * Adjusted Average ** Data Supplied by U.S. Forest Service							
- 13 -							

SOIL MOISTURE

ABOUT APRIL 1, 1971

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †
<u>GILA RIVER</u>							
Frisco Divide	8000	48	13.3	3/31	6.1	12.2	11.8
<u>SALT RIVER</u>							
Black River Divide	9100	48	16.8	3/31	18.1	18.0	16.3
Canyon Creek	7500	48	18.3	3/30	17.8	18.2	15.3
Corduroy Creek	6000	36	13.5	3/30	8.7	13.9	9.2
McNary	7200	48	16.3	3/30	14.6	17.2	15.4
<u>VERDE RIVER</u>							
Mormon Mountain	7500	48	16.1	3/31	17.8	17.7	16.6
Newman Park	6750	48	17.7	3/31	19.5	19.4	17.9
† 1953-67 15-year average							

- 14 -

SNOW COURSE

Baker Butte
 Baldy
 Bear Wallow
 Beaver Head
 Bill Williams Intermediate
 Bill Williams Summit
 Bright Angel
 Camp Wood
 Canyon Creek
 Canyon Point
 Chalender
 Cheese Springs
 Copper Basin Divide
 Coronado Trail
 Crazy Horse
 Emory Pass #1 and #2
 Forest Dale
 Ft. Apache
 Fort Valley
 Frisco Divide
 Gaddes Canyon
 Grand Canyon
 Hannagan Meadows
 Happy Jack
 Hawley Lake
 Heber
 High Peak
 Hummingbird
 Inner Basin #1, #2, #3
 Iron Springs
 Maverick Fork
 McKnight Cabin
 McNary
 Milk Ranch
 Mingus Mountain
 Mogollon
 Mormon Lake
 Mormon Mountain
 Mt. Ord
 Newman Park
 Nutrioso
 Redstone Trail
 Rose Canyon
 Silver Creek Divide
 Smith Cienega
 Snow Bowl #1 and #2
 State Line
 White Horse Lake Junction
 White Spar
 Whitewater
 Williams Ski Run
 Wilson Lake
 Workman Creek

SNOW SURVEYOR

SCS - Dick Enz
 SCS - Bill Cole
 Forest Service - Carl Sollers
 N. A. Josh
 Forest Service - John Sotelo
 Forest Service - John Sotelo
 National Park Service - Kenneth Hulick, Dist. Rgr.
 Forest Service - Walter G. Richardson
 SCS - Dick Enz
 SCS - Dick Enz
 Forest Service - M. Freshour
 SCS - Bill Cole
 SCS - Bill Gray
 Forest Service - John O. Maeder
 Forest Service - Loyd Barnett
 SCS - Jim Powell and Travis Stevenson
 Bureau of Indian Affairs - Raymond Endfield
 SCS - Bill Cole
 Rocky Mtn. Forest & Range Exp. Station
 Forest Service - J. L. Lockwood
 Paul G. Lidbeck
 National Park Service - David A. Strobe, Dist. Rgr.
 N. A. Josh
 Forest Service - Warren Harris
 Bureau of Indian Affairs - Raymond Endfield
 SCS - Dick Enz
 Forest Service - Loyd Barnett
 Ray Freeman
 SCS and USBR - Jack Jorgensen and Jay Roberts
 SCS - Bill Gray
 SCS - Bill Cole
 Ray Freeman
 Bureau of Indian Affairs - Raymond Endfield
 Bureau of Indian Affairs - Raymond Endfield
 Paul G. Lidbeck
 James Lyon
 SCS - Jack Jorgensen
 SCS - Jack Jorgensen
 Salt River Project - Bill Warskow
 SCS - Jack Jorgensen
 Forest Service - John O. Maeder
 James Lyon
 Forest Service - Carl Sollers
 James Lyon
 Salt River Project - Bill Warskow
 Forest Service - Ky Porter
 Forest Service - J. L. Lockwood
 Forest Service - John Sotelo
 SCS - Bill Gray
 Ray Freeman
 Forest Service - John Sotelo
 SCS - Bill Cole
 Rocky Mtn. Forest and Range Exp. Station



The Following Organizations Cooperate in the Arizona Snow Survey Work

FEDERAL

Department of Agriculture

Soil Conservation Service

Forest Service

Apache Forest

Coconino Forest

Coronado Forest

Gila Forest

Kaibab Forest

Prescott Forest

Rocky Mountain Forest and Range Experiment Station

Tonto Forest

Department of Commerce

Weather Bureau

Arizona Section

Department of Interior

Bureau of Reclamation

Region III

Geological Survey

Arizona District

Bureau of Indian Affairs

Fort Apache Reservation

San Carlos Irrigation Project

National Park Service

Grand Canyon National Park

Gila Water Commissioner

Safford, Arizona

STATE

University of Arizona

Arizona Agricultural Experiment Station

Water Resource Research Center

IRRIGATION PROJECTS

Salt River Valley Water Users' Association

Phoenix, Arizona

San Carlos Irrigation and Drainage District

Coolidge, Arizona

PRIVATE

Southwest Forest Industries, Inc.

McNary, Arizona

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ROOM 6029 FEDERAL BUILDING
PHOENIX, ARIZONA 85025

OFFICIAL BUSINESS



POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE

FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*